

IN THE CLAIMS: Please amend Claims 19, 42, and 60 as presented in "clean" format below and add new claims 63-89 as follows:

A1 19. The apparatus of Claim 17, wherein the conductive composite comprises conductive filler and all or part of the conductive filler is in the form of fibers, platelets, or a combination of fibers and platelets.

A2 42. The component of Claim 40, wherein the conductive composite comprises conductive filler and all or part of the conductive filler is in the form of fibers, platelets, or a combination of fibers and platelets.

A3 60. The component of Claim 45, wherein the conductive polymeric composite comprises epoxidized phenol novolac resin, epoxidized cresol novolac resin, poly(diallyl phthalate), and combinations comprising at least one of the foregoing resins.

A4 63. An electrochemical cell component comprising
a conductive core comprising a first side and a second side, wherein the first side comprises an active area; and
a first electrically and thermally conductive polymeric composite substantially covering the active area, wherein the composite is molded to form a channel.

64. The component of Claim 63, wherein the second side has a second active area substantially covered by a second electrically and thermally conductive polymeric composite molded to form a channel.

65. The component of Claim 64, wherein the first, second, or first and second polymeric composite is adhered to the conductive core by an adhesion promoter.

66. The component of Claim 63, wherein the conductive polymeric composite comprises a conductive filler selected from the group consisting of conductive metals, particles coated with conductive metals, carbon, and mixtures containing at least one of the foregoing fillers.

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67. The component of Claim 63, wherein the conductive filler comprises particles in the form of fibers, platelets, or a combination of fibers and platelets.

68. The component of Claim 63, wherein the conductive support has a thermal conductivity of at least about 5 watts/meter °K.

69. The component of Claim 63, wherein the conductive polymer composite has a linear shrinkage per unit length of the molded composite in the X-Y plane of less than or equal to about 0.005.

70. The component of Claim 63, wherein the conductive core comprises metals selected from the group consisting of aluminum, aluminum alloys, nickel, nickel alloys, copper, platinum, magnesium, magnesium alloys, titanium, gold plated metals, and stainless steel.

71. The component of Claim 63, wherein the conductive polymer composite comprises polybutadiene or polyisoprene.

72. The component of Claim 63, wherein the conductive polymer composite comprises a thermosetting polybutadiene or polyisoprene resin and an unsaturated butadiene- or isoprene-containing polymer capable of participating in cross-linking with the polybutadiene or polyisoprene resin during cure, and further wherein the volume to volume ratio of the polybutadiene or polyisoprene resin to the unsaturated butadiene- or isoprene-containing polymer is between 1:9 and 9:1, inclusive.

73. The component of Claim 72, wherein the conductive polymer composite further comprises about 10 to about 90 volume % of conductive filler, based on the total polymer composite volume.

74. The component of Claim 73, wherein the filler comprises synthetic graphite.

75. The component of Claim 63, wherein the conductive polymeric composite comprises epoxidized phenol novolac resin, epoxidized cresol novolac resin, poly(diallyl phthalate), or combinations comprising at least one of the foregoing resins.

76. A method of making an electrochemical cell component, the method comprising
coating an adhesion promoter on a conductive core comprising an active area; and
molding an electrically and thermally conductive polymeric composite onto the
core at least partly over the coated adhesion promoter, wherein said molding further
forms at least one channel in said molded polymeric composite.

77. An electrochemical cell component comprising
a conductive core comprising a first side and a second side, wherein the
first side comprises an active area; and
a first electrically and thermally conductive polymeric composite substantially
covering the active area;
and at least one channel formed in said polymeric composite, said at least one
channel being non-conformal to the underlying conductive core.

78. The component of Claim 77, wherein the second side has a second active
area substantially covered by a second electrically and thermally conductive polymeric
composite having at least one channel that is non-conformal to the underlying conductive
core.

79. The component of Claim 78, wherein the first, second, or first and second
polymeric composite is adhered to the conductive core by an adhesion promoter.

80. The component of Claim 77, wherein the conductive polymeric composite comprises a conductive filler selected from the group consisting of conductive metals, particles coated with conductive metals, carbon, and mixtures containing at least one of the foregoing fillers.

81. The component of Claim 80, wherein the conductive filler comprises particles in the form of fibers, platelets, or a combination of fibers and platelets.

82. The component of Claim 77, wherein the conductive support has a thermal conductivity of at least about 5 watts/meter °K.

83. The component of Claim 77, wherein the conductive polymer composite has a linear shrinkage per unit length of the molded composite in the X-Y plane of less than or equal to about 0.005.

84. The component of Claim 77, wherein the conductive core comprises metals selected from the group consisting of aluminum, aluminum alloys, nickel, nickel alloys, copper, platinum, magnesium, magnesium alloys, titanium, gold plated metals, and stainless steel.

85. The component of Claim 77, wherein the conductive polymer composite comprises polybutadiene or polyisoprene.

86. The component of Claim 77, wherein the conductive polymer composite comprises a thermosetting polybutadiene or polyisoprene resin and an unsaturated butadiene- or isoprene-containing polymer capable of participating in cross-linking with the polybutadiene or polyisoprene resin during cure, and further wherein the volume to volume ratio of the polybutadiene or polyisoprene resin to the unsaturated butadiene- or isoprene-containing polymer is between 1:9 and 9:1, inclusive.

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87. The component of Claim 86, wherein the conductive polymer composite further comprises about 10 to about 90 volume % of conductive filler, based on the total polymer composite volume.

88. The component of Claim 87, wherein the filler comprises synthetic graphite.

89. The component of Claim 77, wherein the conductive polymeric composite comprises epoxidized phenol novolac resin, epoxidized cresol novolac resin, poly(diallyl phthalate), or combinations comprising at least one of the foregoing resins.